

# ATH SERIES

## AC Current Transducer with Time Integration

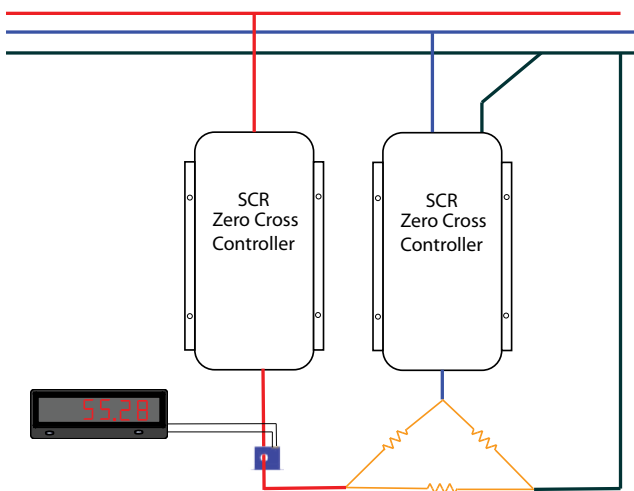
ATH Series (patented) AC Current Transducers are the latest innovation from NK Technologies. Monitoring the current or power controlled by silicon-controlled rectifiers (SCRs) can be a challenge, especially the current used by heaters. When used to monitor zero-crossing (burst) fired SCRs, the ATH will provide an output signal directly proportional to the RMS amperage. Zero-crossing fired controls allow current to flow to the circuit for as short of a time period as one cycle, and off for several cycles. Most current sensors will not work well when there is no current present. This capability is important in case a heating element fails but the process continues operating, which could result in scrapped material.

### AC Current Transducer Applications

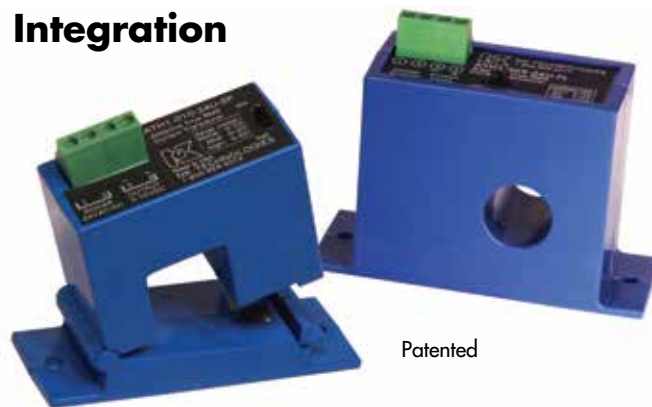
#### Electrical Heaters

- Faster response than temperature sensors.
- Simplest method to monitor pulsed wave forms.

#### Burst-Fired Heating Controls



Free program expedites evaluation process. See page 1 for details.



Patented

### AC Current Transducer Features

#### Industry Standard Outputs

- 4–20 mA, 0–5 or 0–10 VDC.
- Compatible with most automation systems.

#### External Powered

- Split-core models available powered with 24 VAC or DC.
- Solid-core models powered with 24 VAC or DC or 120 VAC.

#### Factory Calibrated

- No need for zero and span adjustment potentiometers.

#### RMS Output

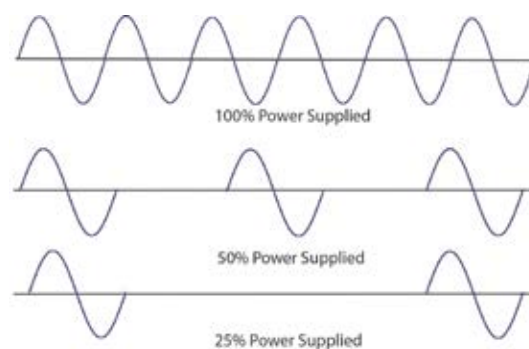
- Accurate measurement of sinusoidal or pulsed current wave shapes.

#### Built-in Mounting Feet

- Simple, two-screw panel mount or attach with optional DIN rail brackets.

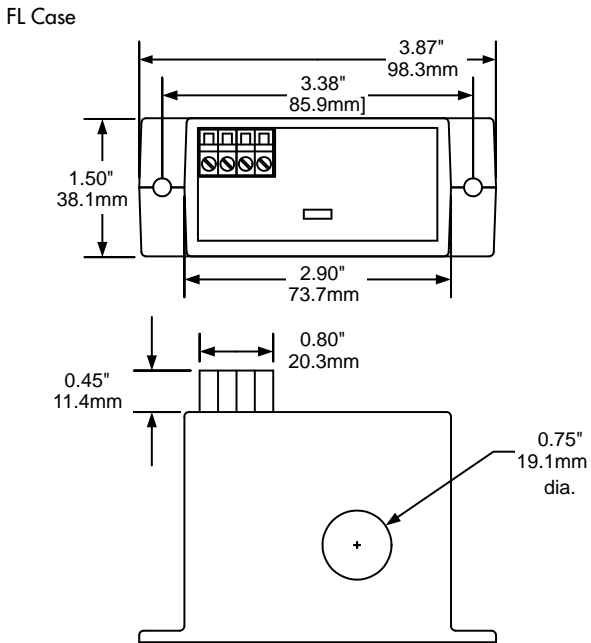
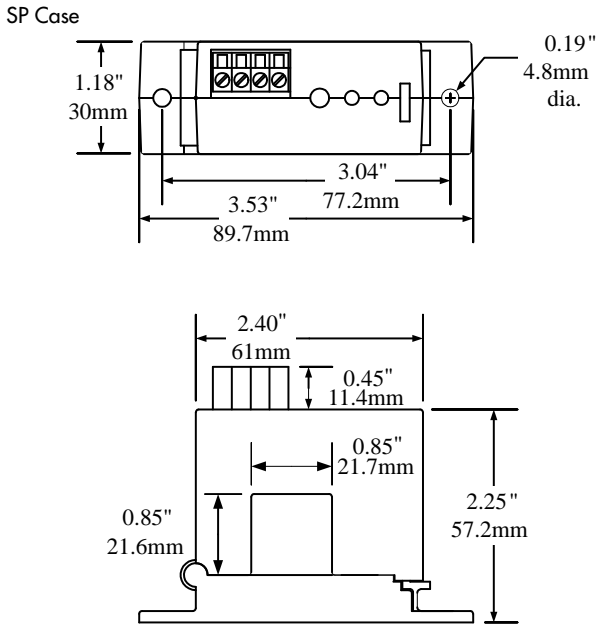
#### Designed for UL, CUL and CE Approval

- Accepted worldwide

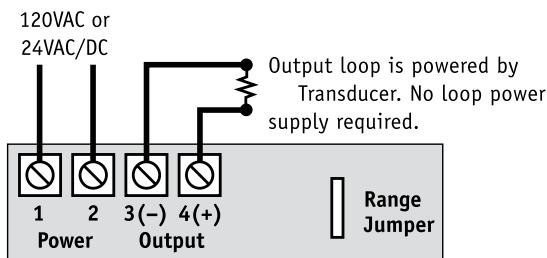


ATH AC current transducers will produce a signal proportional to the current used even when the controller is supplying power in one cycle increments. This is quite common as the “burst-fired” zero crossing witching method produces less harmonic distortion than phase-angle fired controls.

AC Current Transducer Dimensions



AC Current Transducer Connections



AC Current Transducer Specifications

Power Supply	<ul style="list-style-type: none"> <li>Split-core models with 24 VAC or DC</li> <li>Solid-core models with 24 VAC or DC or 120 VAC</li> </ul>
Output	4–20 mA 0–5 VDC 0–10 VDC
Response Time	600 ms maximum, 250 ms at 100% power
Isolation Voltage	Tested to 5000 VAC
Frequency Range	40–400 Hz
Sensing Aperture	<ul style="list-style-type: none"> <li>SP Case: 0.85" (21.6 mm) sq.</li> <li>FL Case: 0.74" (19 mm) dia.</li> </ul>
Environmental	-4 to 122°F (-20 to 50°C) 0–95% RH, non-condensing
Listings	Designed for approval to UL 508 Industrial Control Equipment (USA & Canada)

AC Current Transducers

AC Current Transducer Ordering Information

Sample Model Number: ATH1-420-24U-SP  
AC current transducer, time proportioned, 4-20 mA output, 24 VAC or DC power supply, split-core case.



(1) Range

0	2 and 5 A
1	10, 20 and 50 A
2	100, 150 and 200 A

(2) Output Type

420	4–20 mA
005	0–5 VDC
010	0–10 VDC

(3) Power Supply

24U	24 VAC or DC
120	120 VAC

(4) Case Style

SP	Split-core
FL	Solid-core

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